

Claims

WHAT IS CLAIMED IS:

- 1 1. A method for managing Virtual Private Network (VPN) communications,
2 comprising:
3 receiving a communication from a local client which is directed to a remote
4 client over an insecure network;
5 identifying a VPN associated with the communication;
6 translating the communication for delivery within the VPN; and
7 sending the translated communication via the VPN to a remote transparent
8 VPN service, which manages VPN traffic for the remote client.
- 1 2. The method of claim 1 further comprising, processing the method as a local
2 transparent VPN service, which manages VPN traffic for the local client.
- 1 3. The method of claim 1 wherein receiving further comprising, directing the
2 communication from the local client to the method based on the local client
3 attempting to access a defined port, the defined port is associated with a switch or
4 router that relays the communication to the method.
- 1 4. The method of claim 1 further comprising, interacting with the remote
2 transparent VPN service to manage additional communications between the local
3 client and the remote client via the VPN.
- 1 5. The method of claim 4 further comprising, caching data received from the
2 remote transparent VPN service in a local cache for accelerated delivery to the local
3 client.
- 1 6. The method of claim 1 wherein receiving the communication further
2 includes receiving the communication in at least one of a File Transfer Protocol

3 (FTP) format and a Transmission Control Protocol (TCP) format.

1 7. The method of claim 1 further comprising, communicating with the remote
2 transparent VPN service over the insecure network via Secure Sockets Layer (SSL)
3 or Transport Layer Security (TLS).

1 8. A method for managing Virtual Private Network (VPN) communications,
2 comprising:
3 receiving a communication from a local client which is directed to a remote
4 client associated with a VPN; and
5 inspecting the communication for determining whether the communication is
6 a request for data that resides in a local cache, and if so, delivering the data to the
7 local client, and if not, locating a remote transparent VPN service associated with
8 the VPN, and wherein the communication is translated into formats used by the
9 VPN and sent securely over an insecure network to the remote transparent VPN
10 service for delivery to the remote client.

1 9. The method of claim 8 wherein inspecting further includes establishing
2 secure communications with the remote transparent VPN service using at least one
3 of Sockets Layer(SSL) and Transport Layer Security (TLS).

1 10. The method of claim 8 wherein inspecting further includes identifying the
2 remote transparent VPN service as a service which is managing VPN traffic for the
3 remote client.

1 11. The method of claim 8 wherein receiving further includes intercepting the
2 communication issued from the local client by using a router or switch, wherein the
3 local client directs the communication to the remote client via the communication
4 port and the router or switch relays the communication to the processing of the
5 method.

1 12. The method of claim 8 further comprising:
2 receiving a response communication from the remote client via the remote
3 transparent VPN service, if the communication had been sent via the VPN because
4 it could not be satisfied from the local cache;
5 translating the response based on the formats of the VPN; and
6 delivering the translated response to the local client.

1 13. The method of claim 8 further comprising, managing additional
2 communications associated with the VPN from one or more different local clients
3 which are directed between one or more different remote clients, wherein the remote
4 transparent VPN service manages the additional communications on behalf of the
5 one or more different remote clients.

1 14. The method of claim 8 wherein receiving further includes intercepting the
2 communication after detecting that the local client is transmitting the
3 communication with a non-Hypertext Transfer Protocol (HTTP).

1 15. The method of claim 8 further comprising, interacting with the remote
2 transparent VPN service with mutually signed certificates that are exchanged
3 between the method and the remote transparent VPN service during the interactions.

1 16. A Virtual Private Network (VPN) managing system, comprising:
2 a remote transparent VPN service; and
3 a local transparent VPN service, wherein local transparent VPN service
4 intercepts and manages VPN traffic on behalf of one or more local clients and
5 services communications of those local clients with data in a local cache, if
6 available, and if the data is not available in the local cache, the local transparent
7 VPN service transmits the communications securely to the remote transparent VPN
8 service for delivery and servicing by one or more remote clients which the remote
9 transparent VPN service manages.

1 17. The VPN managing system of claim 16 wherein the local transparent VPN
2 service and the remote transparent VPN service interact via at least one of Secure
3 Sockets Layer (SSL) and Transport Layer Security (TLS).

1 18. The VPN managing system of claim 16 wherein the local transparent VPN
2 service intercepts local VPN traffic on behalf of the one or more local clients by
3 inspecting Transmission Control Protocol (TCP) or File Transfer Protocol (FTP)
4 communications originating from the one or more local clients.

1 19. The VPN managing system of claim 16 wherein the local transparent VPN
2 service intercepts the VPN traffic through a router or switch which is configured to
3 relay communications on a defined port to the local transparent VPN service.

1 20. The VPN managing system of claim 16 wherein communications between
2 the local and remote transparent VPN services occur with mutually exchanged
3 certificates.

1 21. A Virtual Private Network (VPN) managing system, comprising:
2 a communication port; and
3 a local transparent VPN service, wherein VPN communications directed to
4 the communication port are relayed to the local transparent VPN service, the local
5 transparent VPN service attempts to service the VPN communications from local
6 cache and if attempts fail, the local transparent VPN service securely communicates
7 with a remote transparent VPN service via an insecure network to service the VPN
8 communications.

1 22. The VPN managing system of claim 21 further comprising a router or switch
2 which relays the VPN communications to the local transparent VPN service.

1 23. The VPN managing system of claim 21, wherein the system resides on a
2 server and services a plurality of local clients associated with the VPN

3 communications.

1 24. The VPN managing system of claim 21 wherein the system resides on a
2 single client.

1 25. The VPN managing system of claim 21 wherein the local transparent VPN
2 service translates and services the VPN communications on behalf of a one or more
3 of local clients.

1 26. The VPN managing system of claim 25 wherein the remote transparent VPN
2 service translates and service the VPN communication on behalf of a one or more of
3 remote clients.